

CLAIMS

1. An electrical switch for connecting and breaking a circuit, including:
a connecting and breaking mechanism for connecting and breaking the
circuit provided with at least a set of movable contacts and stationary contacts;
5 a electromagnetism drive mechanism for controlling the contacts to be
actuated so as to realize closed circuit;
a housing for accommodating the movable contact and stationary contact;
an arc-extinguishing mechanism disposed in the housing and corresponded
to the movable and stationary contact;
10 a case connected to a base for accommodating the electromagnetism drive
mechanism;

a bedplate associated with the case; and
a holding mechanism disposed on the bedplate for holding the contacts to
connect the circuit after the contacts are connected, the holding mechanism is
15 electromagnetic and has a set of electromagnetic attracting mechanism in which
the movable iron core is made to be a pothook or a baffle mechanism, the movable
iron core is attracted to make the contact mechanism hold the circuit connected
when the electromagnetic attracting mechanism is powered on.

2. The electrical switch set forth claim 1, wherein:
20 the pothook or baffle of said holding mechanism keeps the switch closed by
means of hitching or ramming the movable bolt, said holding mechanism further
includes a coil, a conducting magnet plate, a bracket, and a tension spring; said
pothook intersects the top end of the conducting magnet plate, and has an inclined
plane at its hook so as to disconnect the movable bolt.

3. The electrical switch set forth claim 1, wherein:
25 said holding mechanism is an elasticity type, the pothook or baffle of said
holding mechanism keeps the switch closed by means of elasticity, said holding
mechanism further includes a spring, a stop button, and a reset button, said
pothook or baffle abuts against the movable bolt.

4. The electrical switch set forth any one of claims 1-3, further includes a
30 current limiting mechanism disposed on the bedplate for detecting and limiting
over-current, said over-current mechanism includes a set of electromagnet
corresponding to each of phase circuit and a set of connecting rod mechanism
connected with thereof, said connecting rod mechanism has a rod which can
35 rapidly thrust aside the movable iron core of the holding mechanism when the
over-current occurs, and further includes a spring, a pushing plate, a pushing bar
and a bracket.

5. The electrical switch set forth any one of claims 1-4, further includes a
selection switch mechanism disposed on the bedplate, said selection switch
40 mechanism comprises a set of movable and stationary slide slices, in which the
movable slide slice moves along with the turnbutton bar, said selection switch may
move both in the rotary direction and in the vertical direction to control the
operating state of said switch.

6. The electrical switch set forth any one of claims 1-5, further includes a
45 comprehensive protector, said comprehensive protector has a thermal element
action means corresponding to each phase circuit, the thermal element action
means can disconnect said switch when the over-current occurs, said
comprehensive protector further has a phase failure mechanism corresponding to
the main circuit which can disconnect said switch in detecting the phase failure.